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# Rural Lines

RURAL ELECTRIFICATION ADMINISTRATION • U. S. DEPARTMENT OF AGRICULTURE

DECEMBER  
1957



Can Rural Development

Change This Picture? see Page 3





*A Message from the*

## **ADMINISTRATOR**

It's a brighter Christmas in rural America because of the vision, the faith, and the hard work of thousands of men and women in the rural electrification program.

Relatives and friends are brought closer together this holiday season as a result of other thousands who are improving our telephone systems in rural areas.

To REA's many friends in both programs, I extend heartiest greetings and best wishes from myself and the entire staff of REA.

Sincerely,

*David G. Hamill*

*Administrator.*



## Rural Development Pioneers

**Telephone men in Southern Indiana work with the electric co-op president and other community leaders to lift county income.**

When the ash turns red in the fall, the back roads in Perry County, Ind., twist through some of the most spectacular scenery in the country.

"It's pretty all right," concedes the manager of the local telephone co-op, "but remember, you can't eat scenery."

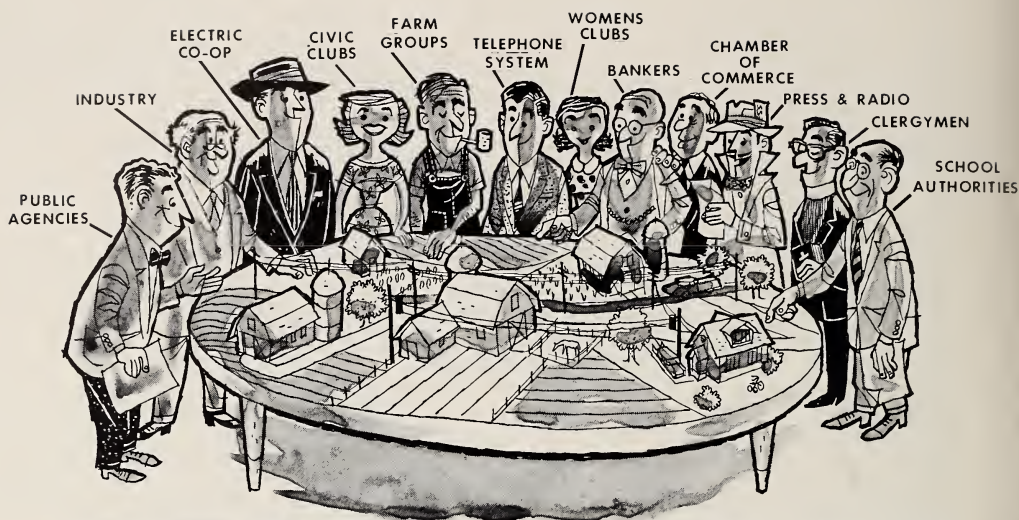
Norbert Peter, of the Perry-Spencer Rural Telephone Cooperative in Tell City, isn't blind to the virtues of the county in which he was born, but he knows its shortcomings, too. And Perry County has more than its share. A combination of small, hilly farms, unproductive land, and vanishing forests has for years kept its farm income well below the national average.

Some families in the county, like the one that used to live in the

house pictured on the front cover, gave up trying to make a decent living, and simply walked off their farms. In other families, the wife drives to a town job in Tell City, leaving a discouraged husband behind to mind the baby and do a few chores. But in still others, like Norbert Peter's, the men have joined with their neighbors to see what they can do to make their county a more prosperous place in which to live.

This group of men who refuse to surrender to apathy are doing far more than helping Perry County, for they happen to live in a pilot county in USDA's Rural Development Program. As pioneers in the plan, they are demonstrating to other low income areas throughout the nation that organized self-help can turn a losing streak into a





Perry County's Long Range Planning Committee, comprised of farm, business, educational, and church leaders, is trying to open up 1,000 new jobs in area.

winning streak.

It's no coincidence that the president, manager, and a director of the telephone co-op and the president of Tell City's Southern Indiana Rural Electric Cooperative are members of rural development subcommittees in Perry County. They take it for granted that rural development is part of their job, for they know that the economic health of their cooperatives is inseparable from the prosperity of their service areas. And it is a good thing for the county that they are in on the program, for, as REA Administrator David A. Hamil said recently, "No local organizations have had more experience in handling a 'bootstrap' operation—which rural development is—than the men and women who brought electricity and telephones to rural areas."

The telephone men and other county business, health, and education leaders didn't wait to be chosen as a pilot county to begin tackling their problems. In Janu-

ary, 1956—7 months before they were designated a part of the Rural Development Program — they formed a Long Range Planning Committee. They wanted to find out what was wrong with Perry County and to figure out something to do about it.

Subcommittees were formed to investigate 5 major trouble spots. There is an agriculture task force, composed of men like Norbert Peter and William Miller, electric co-op president. An education subcommittee chose as its chairman Clyde LaGrange, telephone co-op president; Otto Kemper, a telephone director, was named to the roads subcommittee. Other groups were formed to tackle problems of industrialization and health services. Chairmen of all subcommittees meet together once a month as the Long Range Planning Committee to coordinate plans.

"These subcommittees are each handling a separate phase of the

job," emphasizes Manager Peter, "but we don't forget that it's all one big job. Take the case of a farmer whose income has dropped so low that he's ready to sell out and move his family to Evansville. Those of us on the farm task force are trying to find some way to help him make more money, to find more profitable farm products.

"Maybe we won't be able to do it, but the industrialization subcommittee may be able to get a new factory to locate here. If that can be done, the farmer can get a town job and keep his farm residence," Peter explains.

It is also part of the big job to make the county a more desirable place in which to live. That means better schools, adequate health facilities, improved roads.

The Perry County subcommittees are well equipped to work toward these basic objectives of rural development — (1) To

strengthen industry in low income rural areas and widen the range of off-farm opportunities; (2) to help families who want to stay in farming gain the tools, land, and information that will permit them to farm successfully; (3) to help all people in these areas arm themselves with adequate training and good health.

### Keep Subscribers

"The objective of our telephone co-op," says Peter, "is to keep every subscriber on the farm, and to keep his telephone there, too. It looks to me as if rural development is the only way we're going to do that."

One of the first tasks of the Perry County leaders was to take inventory of the area's assets and liabilities. On the credit side, they found that their county has an excellent labor supply, plenty of good water from the Ohio River, and

Norbert Peter, left, manager of Perry-Spencer Rural Telephone Co-operative, outlines his ideas to Co-op President Clyde LaGrange before rural development meeting. The two men fought to get telephones on farms; now they are fighting to keep subscribers there.





good highway transportation. It is within overnight trucking distance of many industrial centers, and barge transportation is available on the river.

On the debit side, they found a concentration of farms either too small or too unproductive — or both. Located in the hills 50 miles east of Evansville, Perry County used to be timber country. As the timber disappeared, people turned to agriculture for the major part of their income, but found themselves at a disadvantage in competing with better farming areas.

"There's a trend toward consolidation of some of the smaller farms," observes Peter. "We wouldn't try to stop the trend—even if we could—because we don't believe in bucking the tide. But we want to understand what's happening to us and to plan accordingly for the future."

### Factory Closed

When there was a plentiful supply of lumber in Perry County, it formed part of a thriving furniture industry along the Ohio. Today, however, 75 percent of the lumber used comes from outside the area. This fact, along with other cost factors, finally closed the doors of Tell City's largest chair factory last spring. A hard blow, it meant the loss of 550 jobs. There are fewer than 18,000 people in the county.

The seriousness of the job shortage is illustrated by the experience of a safe company which moved into Tell City last year and sought 50 employees through newspaper ads. The manufacturer's personnel office expected from 100 to 150 applications. Instead, more than 1,000 poured in. There is one large

local industry—an electronic tube plant—but most of its 1,800 employees are women. At least 1,000 men, and some say 1,500, could use full time jobs right now.

"The debit side of the ledger looks pretty serious," admits Peter, "but we think we can do something about it."

The agriculture task force has already taken some firm steps. Deciding that the distance from markets will make further dairy expansion unprofitable for the time being, task force members made a farm-by-farm survey to find out who owned feeder calves. As a result of that canvas, 156 Perry County feeder calves were sold at a profit at 2 Evansville auctions this fall. That's the most feeder calves ever to come out of the county in one season.

With the calf project underway, the task force is looking into reforestation of abandoned land, poultry, feeder pigs, and recreation.

"Our scenery may have some value after all," says Peter. "Several city people now have summer places here, and we hope to attract more of them." He recalls that one farmer with property on the river had a nibble from a city prospect recently, but lost him because he didn't have a telephone on the place.

"A recreation boom around here would be a good argument for getting the holdouts to become subscribers," he adds.

### Listed Assets

Also active, the industrialization subcommittee has prepared a brochure listing the assets of Perry County, one of which is the rural telephone service provided by





After reading a brochure on Perry County prepared by the local industrialization subcommittee, a Fiberglas boat builder came to see for himself, soon built this modern plant near Tell City, Ind. It provides 50 new jobs.

Perry-Spencer. The brochure has been distributed to industries by the Indiana Economic Council, and already has been instrumental in attracting a boat building concern which employs 50 men.

Director Kemper's roads group has been among the busiest, and has joined with county commissioners in working out a systematic improvement and marking program for rural roads. The education subcommittee, under President LaGrange's leadership, is thinking in terms of a new consolidated high school which will service a much larger area than those served by present schools. Health leaders have just completed a survey of all families in the county, asking them everything from where they eat lunch to the name of the Perry County health officer. Automatic equipment will tabulate and analyze results.

These activities are just the first stirrings of Perry County's "boot-

strap" operation, but similar beginnings are already underway in 67 counties and 9 trade areas in 30 states and Puerto Rico. Price County, Wis., is capitalizing on peat deposits and scrub timber by introducing several new industries utilizing these raw materials. A loading yard is being built to handle logs for paper manufacture in Chilton County, Ala.

### Organized Auction

In Summers County, W. Va., the local farmers' market has been reorganized as an auction-type market, and in Missouri's Taney County, businessmen and others have bought memberships in an industrial improvement association.

In all but two pilot counties, there are REA-financed telephone and electric borrowers whose leadership can make a success of the Rural Development Program. Like Norbert Peter and his friends in Perry County, they know that rural development is their business.

# How To Bury A 260-Mile System



**M**anager Lyle L. Anderson, of the Northeast Missouri Rural Telephone Co., personally conducts a tour of his recently completed buried cable and wire project near Green City, Mo. The 260-mile buried telephone plant is the first to use materials designed for the job according to REA specifications. (See *Rural Lines*, Dec. 1956 and Nov. 1957.)



Throughout buried system, no wires or cables are spliced or terminated below ground. At left, Anderson shows how splice point between underground wire and house wiring will be attached to side of residence. Plow carries wire to within a few inches of house. At far right, he holds cable terminal strip and pedestal, which will be driven into ground at distribution points. At right, Anderson points to wire terminal pedestal which will be used to serve subscriber drops, provide protection against lightning, or splice reel ends. These pedestals are placed at least every 2,000 feet, even if there are no subscribers, to provide tests points in checking for trouble.





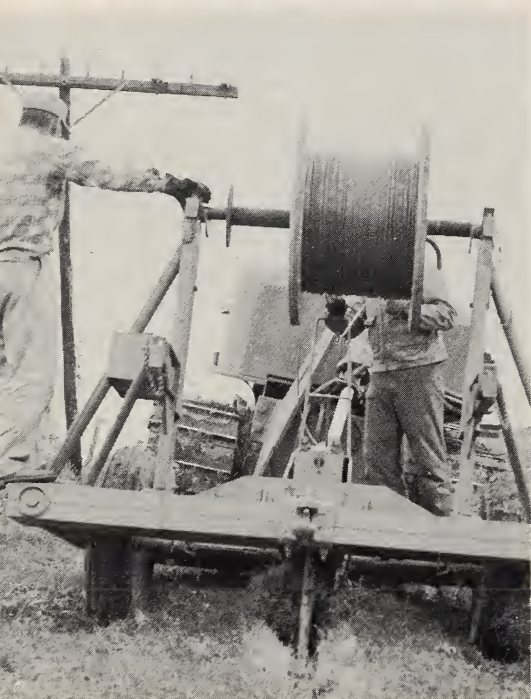
Burying a quarter mile of wire in less than 8 minutes, parade of equipment is led by plow, followed by a scraper to smooth over plow furrow. Out of sight in front are two engineers, who continuously correct staking sheets, and a workman who clear stones out of the way and checks for other obstacles to plowing.







Hydraulic plow, drawn by Diesel tractor, can traverse exceedingly rough terrain without bogging down, often buries 7 miles of wire a day. Two plow crews worked on Green City job.



In action, powerful plowshare cuts through earth like butter, burying wire 18 to 24 inches below surface.

Below, where plow cannot go, or when it reaches terminal point, plowshare emerges to leave loop of wire above ground. Trenching crews or linemen finish job by hand.



# Accounting-by-Mail Course

## Draws 200 Bookkeepers, Managers

**S**ixty telephone borrower employees now are enrolled in the 12-lesson correspondence course in basic accounting being offered by the USDA Graduate School, bringing total registration to over 200. Students studying in the nationwide classroom are scattered from Maine to California, from Florida to Alaska.

As was expected, those with day-to-day responsibilities in handling the financial affairs of REA borrowers lead in course registration. Cashiers and financial clerks signed up in equal numbers with bookkeepers and accountants.

Somewhat surprising was the number of material and work order clerks and plant men signing for the course—25 in all.

### Forming Skill Pool

This on-the-job training via the U. S. mails will provide both telephone and electric borrowers with a pool of trained people for promotion from within, and will improve the quality of work being performed now.

Management also is showing keen interest in better understanding its financial affairs, as attested by the registration of more than 30 managers and potential managers. A couple of secretary-treasurers and a vice-president from telephone company borrowers also signed up. In the electric program, 2 engineers, a power use adviser, and 2 linemen registered.

As a follow-up to this preliminary course, two 12-lesson ad-

vanced accounting courses will be offered about Jan. 1, 1958. Either the course in REA Telephone Borrower Accounting or the one in REA Electric Borrower Accounting will cost \$36 plus \$8 for supplies and postage. Course is not open to Washington, D. C., residents. The basic accounting course or its equivalent in education or experience serves as the prerequisite for the advanced lessons.

The 1958 courses will offer complete instruction in keeping accounting records of each type of borrower. Contents will include: Books of account; systems and classifications of accounts; accounting during organization, construction, and operation periods; preparation and analysis of operating reports; budgeting, requesting, and accounting for loan funds; analysis of financial statements; maintenance of continuing property records; construction and retirement work order procedures; principal and interest payments on REA loans.

### Know REA Systems

The USDA Graduate School has employed instructors who are familiar with REA accounting to conduct the course. Those students making passing grades on the lessons will be given an examination at the completion of each course. REA plans to award those passing the exam on either the electric or telephone course a Certificate of Proficiency in REA borrowers' telephone or electric accounting.



# Telephone Gadgeteer

An inventive sparetime craftsman, R. Lyle McGowan, manager of the Lawrence Telephone Co., Lawrence, Mich., combines junk, scraps and samples in his home workshop to produce practical devices for use by his firm. This handsome, soundproof telephone booth was built for small change, is mounted by cashier's desk in lobby.

## Ticket Sorter

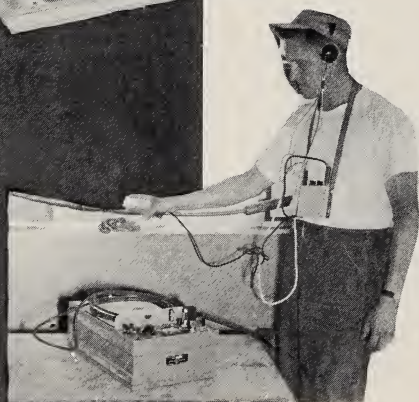
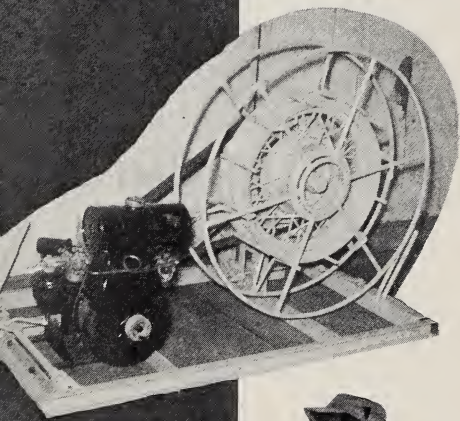
A wooden crate and scraps of composition board went into this 10-compartment box for sorting toll tickets. Four sorting operations are necessary, one for each telephone number digit. Masonite tabs are slotted, and tilted for quick removal.

## Take-up Reel

McGowan powered this portable wire take-up reel with the engine from an old garden tractor. Core of the reel, which will take up to 1 mile of single strand wire, is an automobile wheel. One side of reel can be knocked off to remove wire. It has throw-off device in case of tangle. Using home-made reel, linemen took up 90 miles of old wire in 10 days.

## Trouble Trainer

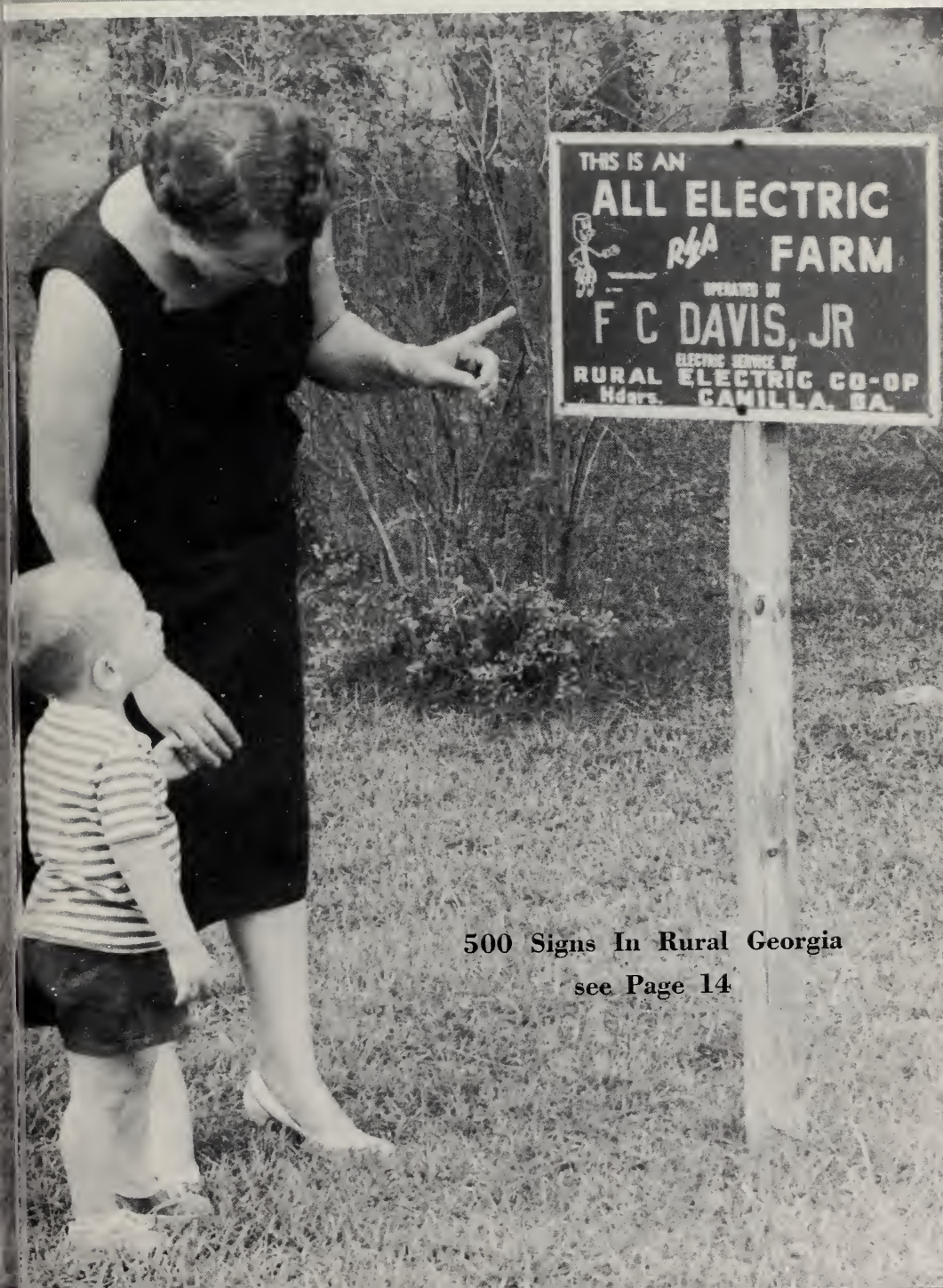
A piece of sample cable strung in the headquarters shop trains plant men on use of cable tester. McGowan puts a short in the cable while outside men are on call, instructs them to find it when they return. Once, a short an inch from the end of the cable baffled them for 2 hours.





# Rural Lines

**REA**



500 Signs In Rural Georgia  
see Page 14

# GEORGIA'S

**Incentive rates, signs, and contests sell 500 farmers on rewiring their homes.**



**M**ore than 500 rural homes scattered through 10 counties of southwestern Georgia now display the bright red-and-white "All Electric Farm" sign of the Mitchell County Rural Electric Membership Corporation.

To qualify for the right to show this sign—as well as the privilege of paying less for electricity than some of their neighbors—the 500 families had to meet several requirements.

First, their homes had to be wired in accordance with safety standards patterned after those in the National Electrical Code. Among other things, this meant that each major appliance had to be connected from a wall receptacle, and, generally, installed on a separate circuit. A minimum of a 100-ampere service load center was required for each residence. Since the Camilla, Ga., cooperative began its "all electric" program in May 1955, only one of the 500 homes qualifying has met these standards without rewiring.

In addition, all agreed to do their cooking, water heating, and refrigeration (and freezing) electrically.

## **Special Rate Offered**

Mitchell County REMC provides consumers with strong incentives

to take these steps. First, it offers "all electric" consumers a special rate. Consumers on the "all electric" rate pay less for energy between 200 and 1200 kwh per month than do consumers on the regular farm and home schedule. Over 1200 kwh per month, the cost per kwh is the same under both schedules.

## **KWH Are Free**

Besides the lower rate, the co-op offers other incentives. The first month's bill following acceptance as an "all electric" consumer is free. Mitchell County REMC will rewire any home for installation of a range, water heater, or laundry equipment without charge. At certain times of the year, it absorbs a 3-month bill for kwh consumed by new major appliances.

The program was sold to rural users through local meetings. Appearing before already existing community improvement clubs, Clarice Turk, co-op home economist and electrification adviser, spelled out the requirements for an "All Electric Farm," emphasized that the lower rate would help pay for



rewiring. Brochures distributed to all users described incentives and listed house wiring requirements. The REMC house wiring staff, as well as a number of qualified private contractors, was available for wiring contracts.

To spur the program last year, Mrs. Turk held an "All Electric Farm" contest, with prizes of \$150 to \$50 going to community clubs in those areas which added the most new electric equipment during 1956.

### Boosts Power Use

So far, reports Manager Ernest Smith, the program has had two beneficial results for the co-op and its service area. First, average farm kwh consumption on the co-op's lines rose from 220 kwh in June 1955—just a month after the program was launched—to 268 kwh in June 1957.

"But just as important," says Manager Smith, "the program has acquainted everybody with the importance of adequate home wiring. Many farmers who have not yet qualified for the "all electric" designation have made important improvements in their wiring. These improvements alone have been worth the entire cost of the promotion, as far as I am concerned."

Smith admitted that when he first offered the "All Electric Farm" signs to qualifying users, he had no idea whether or not many people would want them. He soon found out that consumers not only wanted them, but were impatient when they were not delivered immediately. The names of farmholders are added to signs with fluorescent tape, so that they will glow when headlights strike them



The Harry Holton farm, at top, was recently rewired in 2-day farm electrification course. Above, REMC Engineer Thomas Peel (left) and owner Holton inspect new 100-ampere load center.





A gleaming demonstration kitchen at co-op headquarters helps Electrification Adviser Clarice Turk prove to two visitors the benefits of going "all electric."

at night. Signs are mounted on posts furnished by the co-op.

### Signs Get Results

The co-op has been happy to furnish the metal signs, for they are a growing source of publicity for the program. Farmers and their wives report that a number of motorists stop to ask what the signs mean, and some of them want to take a look at the house. And since they are a source of pride to farmers who own them, they offer an additional incentive to neighboring farmers to go "all electric" themselves.

Emphasis on house rewiring and home appliances does not mean that Mitchell County REMC is going to let its program stop there. It would like farmers to wire all their out-buildings for electricity,

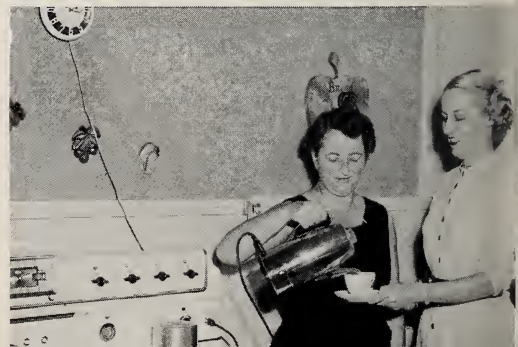
too. Recently, a 2-day course in farm electrification was held on one user's farmstead. Attended by co-op employees responsible for house wiring and inspection, along with 11 vocational agricultural teachers, the farmer's home, two barns, and a tractor shed were completely rewired. The Holton farm will be used from time to time to show other farmers the advantages of electrifying every building.

Adviser Turk made it clear that she is not ready yet to say that her co-op has a success story to tell about the program. "We'll admit that it is a success," she said, "when we meet our objective. And that is every consumer on our lines—7600 of them—with an 'All Electric Farm' sign in his front yard."

Manager Ernest Smith (left), Adviser Turk, and Engineer Peel are the trio who mapped Mitchell County REMC's successful load building plan.



Pouring Mrs. Turk a cup of all-electric coffee, Mrs. F. C. Davis, Jr., said she is "very proud" of "All Electric Farm" sign in her front yard.



# Co-op Leadership Needed In Farm Safety

*Excerpts from an address by Joseph E. O'Brien,  
Chief, REA Electric Engineering Division, before the  
1957 National Job Training and Safety Conference.*

**O**ne important phase of any safety program is farm safety. There are a number of fine programs already in existence, but more safety work is needed.

Farmers and ranchers have a "do-it-yourself" tradition dating back to frontier days. Their isolation made this necessary. While the advent of electricity has made life easier for the farmer, it has not altered his instinct toward self-sufficiency. Probably no other group has devised so many applications of electricity to save labor and improve production as have farmers. They have devised or adapted a large share of the more than 400 uses of electricity on today's farms.

But with the advantages of farm electric power have come the dangers of misusing it. Electricity ranked eighth among the causes of about 12,600 fatal accidents occurring to farm people at home between 1949 and 1953. But while its misuse accounted for only 3.2 percent of the deaths, even one preventable fatality is too much.

The accident statistics should challenge safety specialists and management alike to redouble their efforts to improve the record. The use of electricity and electrical equipment on the farm is continually increasing, and familiarity is unfortunately likely to lead to carelessness in handling.

Probably no people are better able to bring the farm safety cam-

paign directly to rural families than those who work for electric and telephone borrowers. Every co-op worker, from the manager to the office clerk, should rightly be considered a member of the safety staff. The co-op newsletter should speak up for safety. Linemen and home advisers have a very important role in safety education.

In any farm safety program, we must not forget that good wiring and careful use and maintenance of electric equipment are "musts." The danger and wastefulness of shooting at insulators, the importance of recognizing and reporting dangerous line conditions, and the need for staying clear of fallen lines are but a few of the things every farm resident should know. In addition to these things, there are broader aspects of farm safety which should not be ignored by rural power systems.

Material distributed by USDA and other organizations concerned with farm safety come to the attention of all of you. You have a responsibility to interpret it properly, to add to it the knowledge acquired through day-to-day experience, and to pass it along to the people on the farms. In so doing, you will perform a genuine community service and reinforce your own accident prevention programs.

*For farm safety material, write  
National Safety Council, 425 N.  
Michigan Ave., Chicago 11, Ill.*





# 10,000 SAW the SHOW



## NEBRASKA

Irrigation exposition quadruples attendance at its second showing by tying in with popular State Corn Picking Contest.

**T**ying your electric exposition to a popular state or local event may greatly increase attendance, judging by a recent experience of the Nebraska Inter-Industry Electric Council.

When the group held an irrigation exposition in York on Sept. 19, it drew only 2,500 people. But

on Oct. 8, a repeat showing in Lexington pulled a crowd of 10,000. This time, it was held in conjunction with the popular State Corn Picking Contest, and careful planning made it the biggest exposition of irrigation agriculture methods and equipment ever reported to REA by borrowers.

At Lexington, Neb., fairgrounds, Paul Fischback, irrigation specialist, offers tips on selecting correct pipe and sprinklers.





The 50 exhibitors who paid \$25 per space at the show said they found more good potential prospects during that one day at Lexington than during all of an earlier farm show, which lasted 7 days.

Irrigation is big business in Nebraska. The State ranks first in the nation for land under pump irrigation, with 22,100 wells irrigating over 2 million acres. It also ranks first in irrigation expansion, with an 82 percent increase in irrigated acreage during the last 5 years.

This growth has been accompanied by some costly mistakes, which prompted the Nebraska Council and its president, C. A. "Cap" Palmer, to plan an exposition to show farmers the most efficient methods to use in irrigation agriculture. Some equipment in use, they knew, pumps too much water too quickly, ruining land with man-made floods that carry away topsoil.

On the other hand, Council members knew that use of pumps of the correct size and type could save the farmer both his land and his money—and help the power supplier to level off expensive peak loads, as well.

### Publicity Packet Helped

To attract both exhibitors and spectators, the Council employed a professional advertising agency to publicize the exposition. It developed a program, radio spot copy, TV scenario, and letters of invitation to representatives of the irrigation industry, prospective exhibitors, and REA borrowers and interested power suppliers. The agency charged \$600, but it was worth it. By the end of the second show, the group had netted over \$500 in space sales.

Cooperating with the Council in making a success of the show were the State Extension Service, the University of Nebraska College of Agriculture, REA borrowers, electric power suppliers, Soil Conser-

**Following Corn Picking Contest, two irrigation farmers examine cutaways of the latest in motors to drive irrigation pumps.**





**Popular feature of Irrigation Exposition was a miniature layout of irrigation system, including ditch and sprinkler equipment.**

vation Service, irrigation industry, and the Lexington Chamber of Commerce.

The State Corn Picking Contest was held several miles from the exposition site at the Dawson County Fair Grounds, and "Cap" Palmer had to make sure the crowds hopped in their cars and drove to his show after the judging. As "insurance," tickets to a barbecue luncheon were sold at the corn picking parking lot. The barbecue was held at the Fair Grounds, and Secretary of the Interior Fred A. Seaton addressed the crowds following the luncheon.

Following his speech, demon-

strations were held on pumps, electric motor and fuel-type engine selection and operation, and on pipe and sprinkler selection. Surrounding the demonstration area were 50 exhibits displaying the latest in well-drilling rigs, land-leveling devices, electric power units, motors, controls, pipe, and all types of irrigation equipment.

Planning to take advantage of the Corn Picking Contest and coordination among contributing groups helped make the Lexington exposition one of the most successful state efforts ever achieved in the field of power-use promotion and education.

**Dealer demonstrates automatic deepwell turbine pump to visitors.**

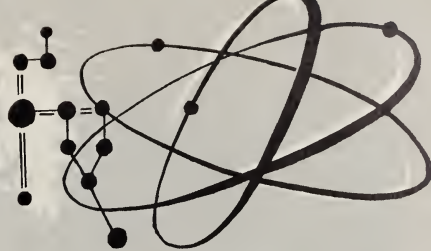


**Next Nebraska show may feature corn and other drying equipment.**





# What's Ahead in Nuclear Power?



Will the average rural co-op ever draw its power from the atom? How soon will nuclear fuels be competitive with other fuels?

Some educated answers to these questions emerged at REA's second Nuclear Power Conference, held in Washington, D. C., on Oct. 7 and 8. There, an audience of 100, including representatives of REA-financed power suppliers, heard Atomic Energy Commission spokesmen describe reactors that seem—experimentally, at least—to be suitable for rural power generation.

The nuclear physicists said that technological and cost barriers must be leveled before competitive and dependable electricity from nuclear fueled plans becomes a reality in this country. But while they couldn't say for sure that the barriers will be cleared away, they felt that atomic energy looks like a very good bet for rural power sometime in the future.

When that day comes, REA Administrator David A. Hamil said, REA will be able to assist its borrowers to take early advantage of atomic energy as a fuel.

Louis H. Roddis, Jr., deputy director, AEC's division of reactor development, observed that the nation's supplies of fossil fuels are not inexhaustible, and declared that atomic energy has a great

potential as a replacement for other fuels in electric power production.

"Large-scale programs are, as you know, going forward in this country and in other countries to advance the technology and bring down the cost of nuclear electric power," Roddis told conferees. "Prospects of success in these endeavors, while not certain, are bright.

"We feel confident that beginning in the 1960s, an increasing percent of new electric generating capacity added in the U. S. each year will be nuclear, rising until near the end of the century more than three-fourths of total additions will be nuclear."

AEC's "genealogy of nuclear power:" 1957-1959—An experimental period. Prospects for competitive nuclear-fueled electric power are almost nil.

1960-1965—A "first generation" of industrial nuclear power plants. Prospects for lower costs over the preceding period look good. However, they are not expected to be competitive in the U. S. with costs of the most advanced conventionally fueled plants.

1965-1970—A "second generation" of nuclear plants. Nuclear reactor plants going into service toward the end of this generation should, after their initial shake-



During break in REA's second Nuclear Power Conference, held in Washington, D.C., Oct. 7-8, REA Administrator David A. Hamil (second from left) talks with conferees about their plans to use nuclear reactors for power generation on arrangement with Atomic Energy Commission.

Visitors are (left to right): John N. Keen, manager, Wolverine Electric Cooperative, Inc., Big Rapids, Mich.; Peter J. Kalamarides, director, Chugach Electric Association, Inc., Anchorage, Alaska; Robert J. Daverman, of J. & G. Daverman & Co., consulting engineer for Wolverine; and William A. Reynolds, Chugach power plant superintendent.

down, achieve costs in the range of 8 to 11 mills per kwh. Further cost reductions expected during the lifetime of the plants should make them competitive with modern conventional plants in some parts of the U. S., at least.

Conferees heard that cost imbalances have temporarily halted contract negotiations for nuclear power reactors scheduled to be

operated by two REA borrowers under AEC's Power Demonstration programs. The co-ops are the Rural Cooperative Power Association, Elk River, Minn., and Wolverine Electric Cooperative, Big Rapids, Mich. The project of a third REA borrower, the Chugach Electric Association, Anchorage, Alaska, is still in the research stage.

## J. Warner Pyles, Pioneer Project Adviser, Retires

J. Warner Pyles, pioneer project adviser and fieldman in REA's early Development Division, retired October 31, 1957, after nearly 22 years of service in the rural electrification program.

As head of the Wiring Section in REA's former Utilization Division from 1937 to 1942, Pyles initiated farmstead wiring specifications, inspection, and group-wiring and consumer-loan procedures.

During World War II he was head of the Hydro-Electric Plants Unit. Projects on which he worked included those which generate power for Oconto Electric Cooperative, Oconto Falls, Wis., and Alabama Electric Cooperative, Inc., Andalusia, Ala. At war's end he moved into a job as head of the Surplus War Property Office. There he determined borrowers' needs and located equipment, negotiated prices, and placed orders for \$4½ million worth of equipment, valued at about \$10 million.

Since mid-September in 1947, Pyles has worked in the management field. He directed field operations in Region 6, Minnesota and the Dakotas, later transferring to a headquarters position as management specialist in the Electric Operations and Loans Divisions.



# POWER USE EXCHANGE



**TENT SHOW**—"Rural Youth Centers" for 4-H exhibits and contests were set up at 3 county fairs this fall by **Southern Maryland Electric Cooperative**, Hughesville. Each year the co-op provides tent, chairs, tables, display rack, and other equipment needed for 4-H fair activities. 4-H girls use an electric range, sewing machine, and other electric equipment in their demonstrations. Boys present a variety of demonstrations on wiring, egg candling, lamp making, tobacco grading. Electrification adviser Frank Schindler and home economist Leora Seeber assist county agents and club leaders throughout the 3-day fairs.

**NEW JOBS**—Two Carolina electrification advisers "went places" in 1957. "Bob" Carroll, ex-EA for **Broad River Electric Cooperative**, Gaffney, S. C. is now extension agricultural engineer for Clemson Agricultural College, Clemson, S. C. Charles Overman, formerly agricultural engineer and editor of *The N'Lightner*, **Blue Ridge EMC**, Lenoir, N. C., is now agricultural engineer for the *Carolina Farmer*, North Carolina's rural electric magazine.

**SUPER SALESMAN** — Sales at Decatur County Fair accounted for \$139 in the total of \$500 worth of bulbs sold by 4-H junior leaders this fall in a campaign sponsored

by **Decatur County REMC**, Greensburg, Ind. Clubs will net \$150 from the activity.

**BRIGHT CROSSROADS**—Photoelectric street lights make four heavily travelled rural crossroads safer in area served by Buena Vista Rural Electric Cooperative, Storm Lake, Iowa. *REA News* in reporting the courtesy installations to co-op members says, "We hope members in these areas will help us by reporting when you notice these lights are out."

**FREE TIMER**—Forked Deer Electric Cooperative donated an automatic timer to light a large V-shaped sign near Halls, Tenn., airport, as its part in assisting the Halls Civic Club Industrial Committee in its drive for new industry. Co-op headquarters is at Halls.

**PLANNER**—Charles S. Hooper, Jr., manager of Southside Electric Cooperative, Crewe, Va., is new chairman of the Southside Virginia Industrial Development and Economic Planning Commission. This 3-year-old development group covers 7 counties in areas served by Southside and Mecklenburg Electric Cooperatives. Purpose of the Commission is to attract industries to 10 towns in the area and to show the area's potentials for future expansion.

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